REMARKS

Claims 1 – 18 are pending in the present application. Claims 1 and 5 have been amended. Claim 19 has been newly added, leaving Claims 1 – 19 for consideration upon entry of the present amendment.

No new matter has been introduced by this amendment. Support for new Claim 9 can be found in at least Claim 5 as originally filed.

Claims Rejected Under 35 U.S.C. § 112

Claim 5 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point our and distinctly claim the subject matter which applicant regards as the invention. (Office action dated March 8, 2007, page 2)

The Applicants have now amended Claim 5 to render this rejection moot. Applicants respectfully request allowance of the claim.

Claims Rejected Under 35 U.S.C. § 102/103

Claims 1 – 8 and 13 – 18 have been allegedly rejected under 35 U.S.C. § 102 (b) or in the alternative under 35 U.S.C. § 103 (a) as being obvious over U.S. patent No. 4,830,716 to Ashmead. (Office action dated March 8, 2007, page 3) Applicants respectfully disagree because Ashmead does not teach the invention with any degree of specificity.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was make. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q.

494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claim 1 as presently amended is directed to a method for preparation of an amino acid chelate, comprising the step of reacting a naturally occurring or synthetic metal carbonate with an acidic amino acid in an aqueous solution, wherein the metal carbonate is one or more carbonates with a valence of 2 or more selected from the group consisting of calcium carbonate, copper carbonate, zinc carbonate, ferrous carbonate, cobalt carbonate, chromium carbonate, magnesium carbonate and manganese carbonate; and the acidic amino acid is glutamic acid, aspartic acid or a combination thereof.

Ashmead teaches pharmaceutical grade amino acids chelates free of interfering anions. (see Abstract) Ashmead teaches that the amino acids are manufactured by reacting an amino acid ligand with a metal member selected from the group consisting of elemental metals, metal oxides, metal hydroxides and metal carbonates. (see Abstract; see also Col. 5, lines 35 – 40) The reaction may be carried out in the presence of non-interfering anions such as anions from citric acid, ascorbic acid, acetic acid, carbonic acid and ammonium and alkali metal salts. (see Abstract)

In Ashmead, the metal carbonate is just mentioned as one kind of metal carbonate in a laundry list of metal carbonates. (see Abstract; see also Col. 5, lines 35 – 40) This is typified in Equation (5) and Example VII of Ashmead. Similarly, the glutamic acid and aspartic acid are mentioned in a long laundry list of amino acids. (see Col. 5, lines 24 – 34)

Ashmead teaches that metal carbonates are relatively insoluble in aqueous solutions, and the solubility of metal carbonates may is increased by the addition of carbon dioxide or a soluble carbonate, such as sodium carbonate, to the solution. In addition, care must be taken not to lower the pH to the point that the reaction between the metal from the metal carbonate and amino acid does not take place. (seeCol. 6, lines 25 – 61) With reference to Example VII, sodium carbonate and citric acid are additionally required for a desired reaction, besides the copper carbonate (used as the metal carbonate) and glycine as an amino acid.

In this regard, comparative experiments have been provided to demonstrate distinctions between Ashmead and the claimed invention as described below. As seen in the experimental results below, the addition of sodium carbonate and citric acid is essential to the reaction of copper carbonate and glycine in Ashmead.

The comparative reactions were performed according to the following example:

(1) The reaction was performed in the same conditions as in Ashmead (Example VII), except that sodium carbonate and citric acid were not added thereto ("Condition (1)").

→ The reaction was performed by using only calcium carbonate (metal carbonate) and glycine (amino acid).

(2) The reaction was performed in the same conditions as in Ashmead, except that citric acid was not added thereto ("Condition (2)").

→ The reaction was performed by using calcium carbonate and glycine, followed by addition of sodium carbonate.

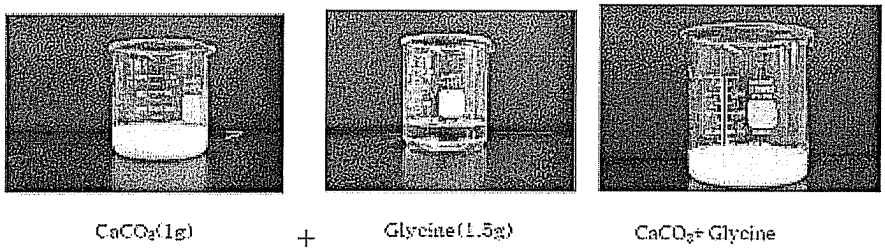
(3) The reaction was performed in the same conditions as in Ashmead ("Condition (3)").

→ The reaction was performed by using calcium carbonate and glycine, followed by addition of sodium carbonate and citric acid

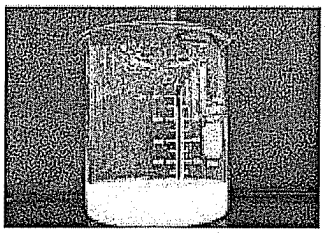
(4) The reaction was performed in the same conditions as in the instant invention ("Condition (4)").

→ The reaction was performed by using only calcium carbonate (metal carbonate) and aspartic acid (acidic amino acid).

2. The result of reaction according to Condition (1)



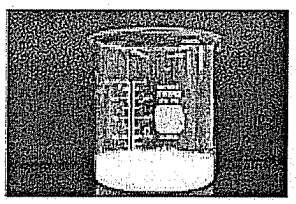
[After reaction for 24 hours]



$CaCO_3$+ Glycine

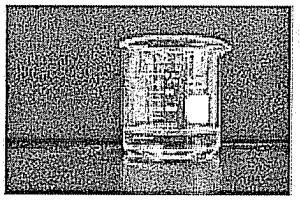
The resulting solution of Condition (1), in which calcium carbonate was reacted with glycine, was of an opaque liquid even after 24 hours, thus it was confirmed that no amino acid chelate was not synthesized.

3. The result of reaction according to Condition (2)

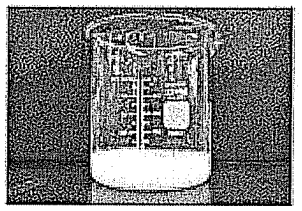


$CaCO_3$+ Glycine

+

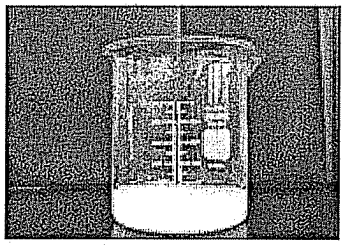


Na_2CO_3(1g)



$CaCO_3$+ Na_2CO_3+ Glycine

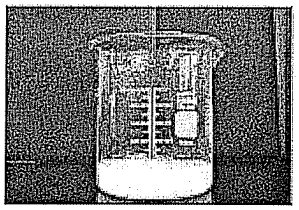
[After reaction for 24 hours]



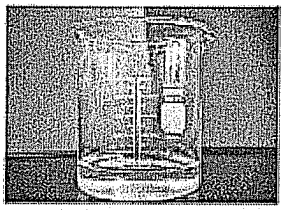
$CaCO_3$+ Na_2CO_3+ Glycine

The resulting solution of Condition (2), in which calcium carbonate was reacted with glycine followed by the addition of sodium carbonate, was of an opaque liquid even after 24 hours, thus it was confirmed that an amino acid chelate was not synthesized.

4. The result of reacting according to Condition (3)



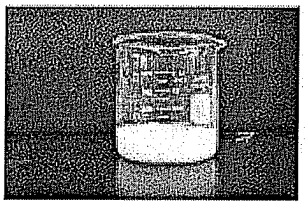
$CaCO_3$+ Na_2CO_3+ Glycine + citric acid (2 g)



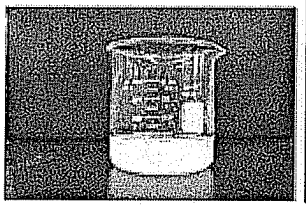
$CaCO_3$+ Na_2CO_3+ Glycine

The resulting solution of Condition (3), in which calcium carbonate was reacted with glycine, followed by the addition of sodium carbonate and citric acid, resulted in a clear solution after 24 hours, thus it was confirmed that an amino acid chelate was synthesized.

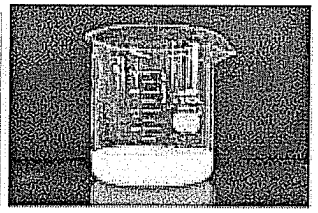
5. The result of reaction according to Condition (4)



$CaCO_3$(1g) +

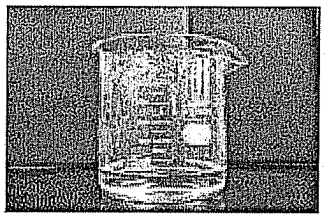


Aspartic acid(2.66g)



$CaCO_3$+ Aspartic acid

[After reaction for 24 hours]



$CaCO_3$+ Aspartic acid

The resulting solution of Condition (4), in which calcium carbonate was reacted with asparitic acid, resulted in a clear solution after 24 hours, thus it was confirmed that an amino acid chelate was synthesized.

Conclusions

From the result of comparative experiments above, an amino acid chelate can be synthesized according to Ashmead only when sodium carbonate and citiric acid are added to the reaction solution of calcium carbonate and glycine, whereas an amino acid chelate

can synthesized in the instant invention even when only calcium carbonate and asparitic acid were used.

In other words, when either of sodium carbonate and citric acid is not added, an amino acid chelate is not produced from the reaction of copper carbonate and glycine. As a result, Ashmead provides a preparation method comprising sodium carbonate, citric acid, copper carbonate and glycine as essential, constitutional elements for invention. If all of these constitutional elements are not used together, Ashmead should be considered as an incomplete invention. Thus Ashmead does not teach the invention completely.

Applicants respectfully request a withdrawal of the 102/103 rejection and an allowance of the claims.

It is believed that the foregoing remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this response or otherwise, please charge them to Deposit Account No. **06-1130** maintained by Assignee.

Respectfully submitted,

By: /David E. Rodrigues/
David E. Rodrigues
Registration No. 50,604

Date: June 8, 2007
Customer No.: 23413
Telephone: (860) 286-2929